



OFFICE OF  
THE CHAIRMAN

DEPARTMENT OF TRANSPORTATION  
NATIONAL TRANSPORTATION SAFETY BOARD

WASHINGTON, D.C. 20501

May 28, 1970

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A70-25

Honorable John H. Shaffer  
Administrator  
Federal Aviation Administration  
Department of Transportation  
Washington, D. C. 20590

Dear Mr. Shaffer:

Lear Jet, N1021B, crashed into Lake Michigan on November 9, 1969, while executing an Automatic Direction Finding (ADF) approach to the Horlick-Racine Airport. As a consequence of this accident, we are submitting an air safety recommendation for your consideration.

The present ADF approach is made on the 206° inbound bearing of the Horlick-Racine Beacon (RBN). At 3.6 nautical miles from the RBN, the Marion Fix is utilized to determine the altitude minima for the approach. The Marion Fix can only be determined by radar assistance from Milwaukee Approach Control and/or an ADF bearing from the Outer Marker of the General Mitchell Airport ILS. To use this fix, the descending aircraft must have either dual ADF capability and/or receive an assist from Milwaukee Approach Control.

The capability of the Marion Fix can be expanded by designating a radial of the Milwaukee VORTAC (MKE) to support further the fix. Adoption of this suggestion would permit this fix to be utilized by aircraft with single ADF and VOR capability, and serve as an additional backup to dual ADF equipped aircraft. The sole question to be resolved would be the ability of the MKE VORTAC to supply sufficient signal strength to support this requirement. Therefore, we recommend that you investigate the feasibility of designating a radial of the MKE VORTAC as an additional method of identifying the Marion Fix. Should the MKE VORTAC possess the capability of supporting this requirement, this radial should be made a part of the Marion Fix, and all procedures should be modified accordingly.

Honorable John H. Shaffer

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This recommendation should serve to improve operations at the Horlick-Racine Airport both from the standpoint of safety as well as utility.

Sincerely yours,

A handwritten signature in cursive script, reading "John H. Reed", with a long horizontal flourish extending to the right.

John H. Reed  
Chairman